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# 1984-88 School Capital Funding Plan

## Finance and Administration Division

Alberta
EDUCATION

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# 1984 - 1988 SCHOOL CAPITAL FUNDING PLAN

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# 1984-88 SCHOOL CAPITAL FUNDING PLAN

## BACKGROUND

The Province of Alberta is organized into 137 active and autonomous school jurisdictions: 91 public school jurisdictions and 46 Roman Catholic school jurisdictions. All jurisdictions receive similar provincial grants for operating schools and funding for capital projects. The provincial share of capital funding, which occurs by way of debenture payments, varies from 60 to 80 percent. As a consequence the local burden for capital expenditures is in the range of 20 to 40 percent of construction costs. This infusion of large amounts of provincial funding into school facilities has resulted in many of these local and autonomous school jurisdictions undertaking extensive building programs, with limited impact on local property taxes but not without impact on the total financing of education in Alberta. More than forty percent of the approved increase to Alberta Education's operating budget in the 1983-84 budget year was allocated to debenture servicing. This means that every school jurisdiction feels the impact of extensive building.

The flurry of school building that was typical across the continent in the 1960's continued unabated in Alberta into the late 70's. The provincial mechanisms in place during the 1960's and 70's for approving and funding schools seemed to have limited effect in curbing the rapid rate of building. There was little evidence of careful long-range planning on the part of jurisdictions or the province. Each project proposed by a jurisdiction was justified, reviewed and approved by the province on an individualized basis.

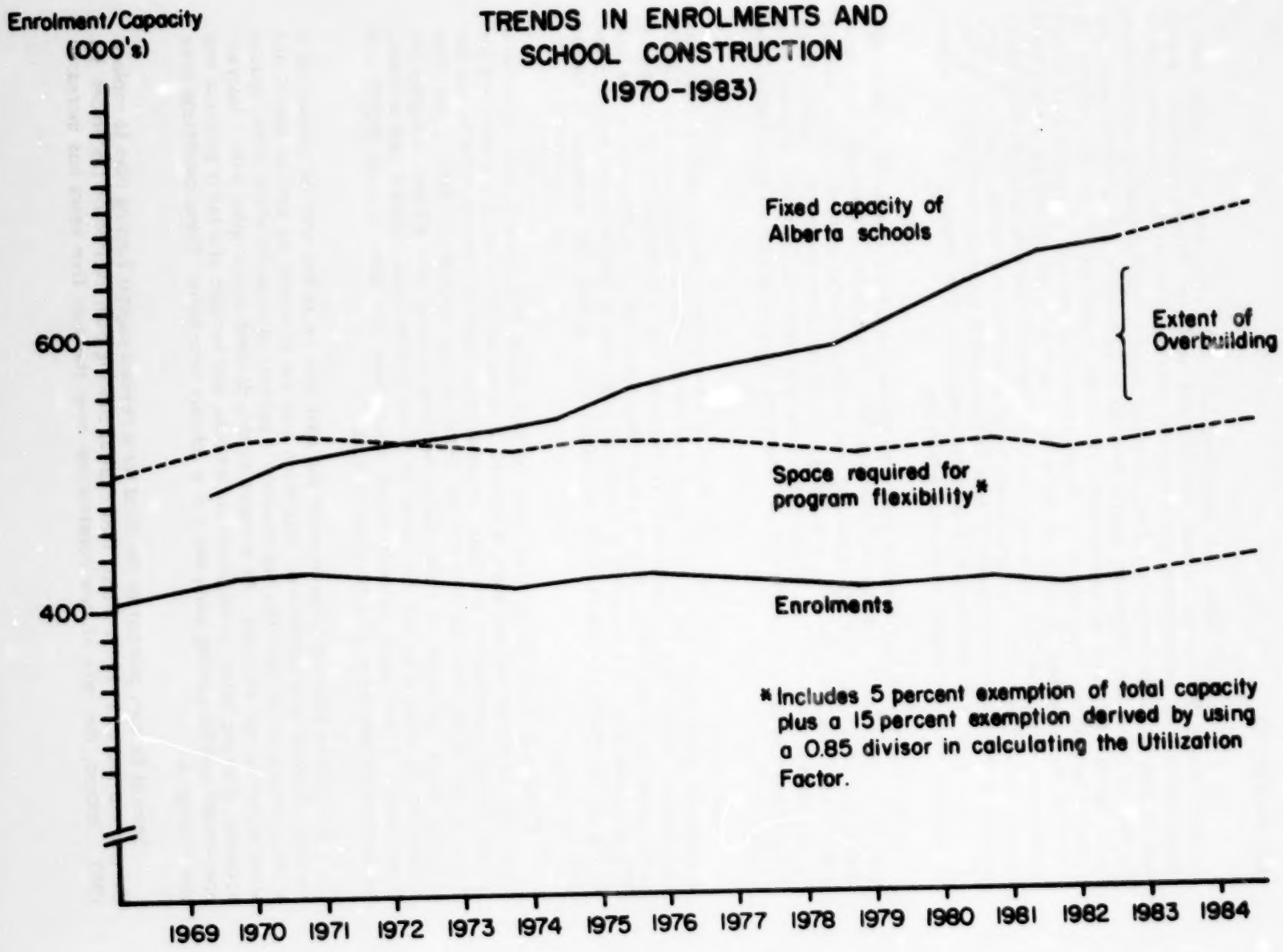
The result was that by 1979, when a new school capital funding plan was introduced, there were spaces in Alberta schools for 600,000 pupils and only 420,000 enrolments. Since 1979, enrolments have increased only slightly but 75,000 additional pupil spaces have been built. Figure 1 describes the extent of building during the late 70's and early 80's. A reasonable inventory of pupil spaces (shown by the dotted curve in Figure 1), which was the norm in the early 70's, has been far surpassed in recent years.

There are some things that must be said about this current state of affairs. First, not all of the excess space is located in areas where there is a great need for space. This is especially true in many areas of rural Alberta. Second, Alberta now has some of the finest new facilities to be found on the continent. Indeed, our core schools, energy efficient schools, earth-sheltered schools, and schools designed for conversion to other uses are the focus of much international interest and acclaim. Even some of our older schools which have been upgraded through BQRP and modernization now serve as lighthouse projects.

The active building program over the past five years has been as a result of a number of converging conditions. Migration into the province, as well as significant internal migration or mobility, has resulted in pockets of students where school spaces were scarce or non-existent. As a result of this demand and coupled with a buoyant economy, a strong belief in neighborhood schools, and because of a fairly generous and open-ended capital funding plan, many new schools were built. These conditions have since changed.

Several factors pointed to the need for a revised capital funding plan to replace the one introduced in 1979. First, that capital funding plan expired on December 31, 1983. Second, the rate of new construction over the past five years has increased

Figure 1


TRENDS IN ENROLMENTS AND
SCHOOL CONSTRUCTION
(1970-1983)
Enrolment/Capacity
(000's)
600
400
Fixed capacity of
Alberta schools
Extent of
Overbuilding
Space required for
program flexibility*
Enrolments
* Includes 5 percent exemption of total capacity
plus a 15 percent exemption derived by using
a 0.85 divisor in calculating the Utilization
Factor.
1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984

debenture costs significantly. Third, because school jurisdiction decisions made at the local level have a province-wide impact, school jurisdiction planning must be able to fit into the provincial context. Finally, unlike the 1979-83 period, the current economic conditions and current patterns of migration are such that extensive overbuilding of schools space cannot, and need not, be continued.

## THE 1979-83 SCHOOL CAPITAL FUNDING PLAN

The capital funding plan that was introduced on January 1, 1979 had several features that were different from previous practices. School jurisdictions were required to submit three-year capital plans to the provincial planners for approval and funding. These plans had to reflect local planning and priorities and had to include enrollment projections for at least five years.

Funding under this plan was determined by a formula which included factors to adjust for financial equity, jurisdiction utilization of space, approved areas, and changes in construction costs. Simply defined, the funding formula was of the following form:

$$P = E \times U \times A \times S$$

where: P is the provincial support for the project,

E is the equity factor,

U is the utilization factor,

A is the approved area factor, and

S is the support factor which includes adjustments for inflation and distance.

A more detailed discussion of these four factors follows.

### Equity Factor (E)

The Equity Factor (E) is calculated by the following formula:

$$E = 1 - 0.15(e)$$

where: e is the local equalized assessment per resident pupil divided by the average provincial equalized assessment per pupil.

The Equity Factor (E) is calculated by the above formula and limited to a range of 0.85 to 0.97. In other words, the wealthiest jurisdiction could expect 85 percent support for a capital project while a poor jurisdiction could qualify for 97 percent support for a similar project under this factor.

### Utilization Factor (U)

The Utilization Factor (U) is designed to encourage jurisdictions to carefully plan for additional space requirements and it does this by penalizing them if they undertake projects while they have excess or underutilized space. The Utilization Factor is calculated as follows:

$$U = u \div 0.85$$

where: u is the enrollment of the system divided by the system operational capacity (i.e. the system fixed capacity less allowable exemptions).

In practice U is allowed to vary in the range of 1.00 or less. The 0.85 divisor used in the formula has proven to be a useful figure in planning inasmuch as it provides for flexibility in terms of space. For example, if a school has a fixed capacity of 525 pupils and an operational capacity of 500 pupils, U becomes 1.00 when the enrolment reaches 425.

$$U = 425/500 \div 0.85 = 1.00$$

and the jurisdiction qualifies for maximum support on its next project under the Utilization Factor. The difference between the 525 fixed capacity and the 425 practical, or enrolment, capacity (100 pupil spaces) is intended for flexibility. In Alberta where classrooms are designed for 25 pupils it means that in the above example, four classrooms are available to accommodate smaller class sizes or other programming considerations.

Over the past five-year period, the funding formula was adjusted to provide greater financial support to school jurisdictions. The results of these adjustments are shown as exemptions of space in Table 1. More than 231,000 pupil spaces have been exempt for various reasons. It now appears that, rather than continue using exempt spaces, many school jurisdictions have used the reduced operational capacities as an indicator of need to build new space.

**Approved Area Factor (A)**

While many school jurisdictions seek to overbuild by providing larger than necessary facilities, Alberta Education has developed a set of guidelines recommending areas for most instructional and non-instructional spaces. These guidelines are available to educational facility planners across the province. When it comes to approving areas, Alberta Education relies on a gross area for a given capacity. It is left to the ingenuity of the architect to design around this figure although the gross area is large enough to accommodate all of the specifications in the published area guidelines.

The Area Factor (A) is calculated by multiplying the planned capacity of a school by the approved area per pupil.

Depending on the type of school and the planned capacity, approved areas vary. Several examples are drawn from current regulations:

| | |
|---|---|
| 2000 pupil composite high school | 9.37 $m^2$/pupil |
| 500 pupil academic high school | 9.90 $m^2$/pupil |
| 500 pupil junior high school | 8.54 $m^2$/pupil |
| 300 pupil permanent elementary school | 7.57 $m^2$/pupil |
| 300 pupil core elementary school* | 9.92 $m^2$/pupil |
| 150 pupil portable section of core school* | 4.00 $m^2$/pupil |

*When combined into a typical core-portable configuration the result is 7.95 $m^2$/pupil, i.e., 3576 $m^2$ to accommodate 450 pupils.

Table 1

**JURISDICTIONAL PROFILE OF CAPACITIES,**

**EXEMPTIONS AND ENROLMENTS**

| | Fixed Capacity | EXEMPTIONS[1] Age | Classroom | "U Factor"[2] | 3 - Year | Leases | Disposals | Special Education | Other[3] | Operational Capacity | Enrolment (Sept. '82) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Counties | 128,760 | 6,905 | 10,220 | 14,880 | 9,865 | 550 | 2,955 | 145 | 630 | 82,610 | 84,319 |
| Divisions | 102,645 | 3,920 | 8,225 | 11,824 | 9,825 | 350 | 2,900 | 30 | 1,480 | 64,091 | 67,003 |
| Catholic Districts | 115,995 | 3,575 | 8,200 | 13,013 | 15,020 | 4,020 | 175 | --- | 995 | 70,997 | 73,738 |
| Public Districts | 305,320 | 24,045 | 17,650 | 33,622 | 18,300 | 1,745 | 375 | 75 | 3,405 | 206,103 | 190,523 |
| Special Districts | 8,080 | 75 | 525 | 1,098 | 745 | --- | --- | 270 | 125 | 5,242 | 6,224 |
| Province | 660,800 | 38,520 | 44,820 | 74,437 | 53,755 | 6,665 | 6,405 | 520 | 6,635 | 429,043 | 421,807 |
| Percent of Fixed | 100.0% | 5.8% | 6.8% | 11.3% | 8.1% | 1.0% | 1.0% | 0.1% | 1.0% | 64.9% | |

[1]Effective December 10, 1982

[2]Calculated (Enrolment ÷ 85) - Enrolment

[3]Includes: spaces built without provincial funding, district offices, administration offices, ESL programs, district compensatory funded programs, and supportive student services.

Areas included in the design beyond the approved areas must be funded locally, with no provincial support. Sometimes this is the case when local agencies enter into joint-use agreements with the school jurisdiction. An example might be the added space required for a community-use swimming pool as part of a high school complex.

### Support Factor (S)

The Support Factor (S) is meant to reflect the true costs of construction in any given period of time. To ensure close tracking of actual costs, quantity surveys are carried out and used as a basis for setting support rates and distance allowances on a periodic basis. When actual tender or bid prices are below the estimated Support Factor, the actual project costs are used in the formula.

Overall the effect of the funding formula is to give each jurisdiction an opportunity to optimize its position through the effects of the Utilization Factor and to enable them to obtain the largest possible share of the support available after the Equity Factor is applied. The Equity Factor itself operates beyond the parameters under control by the local jurisdictions inasmuch as it is based on provincial average assessments.

So that the effects of planning can be allowed to fully materialize, a three-year delay is incorporated between the date of the Minister's approval of the tender or bid on the project and the date when final support is calculated and the provincial and local shares of the debenture costs are determined.

## 1984-88 SCHOOL CAPITAL FUNDING PLAN

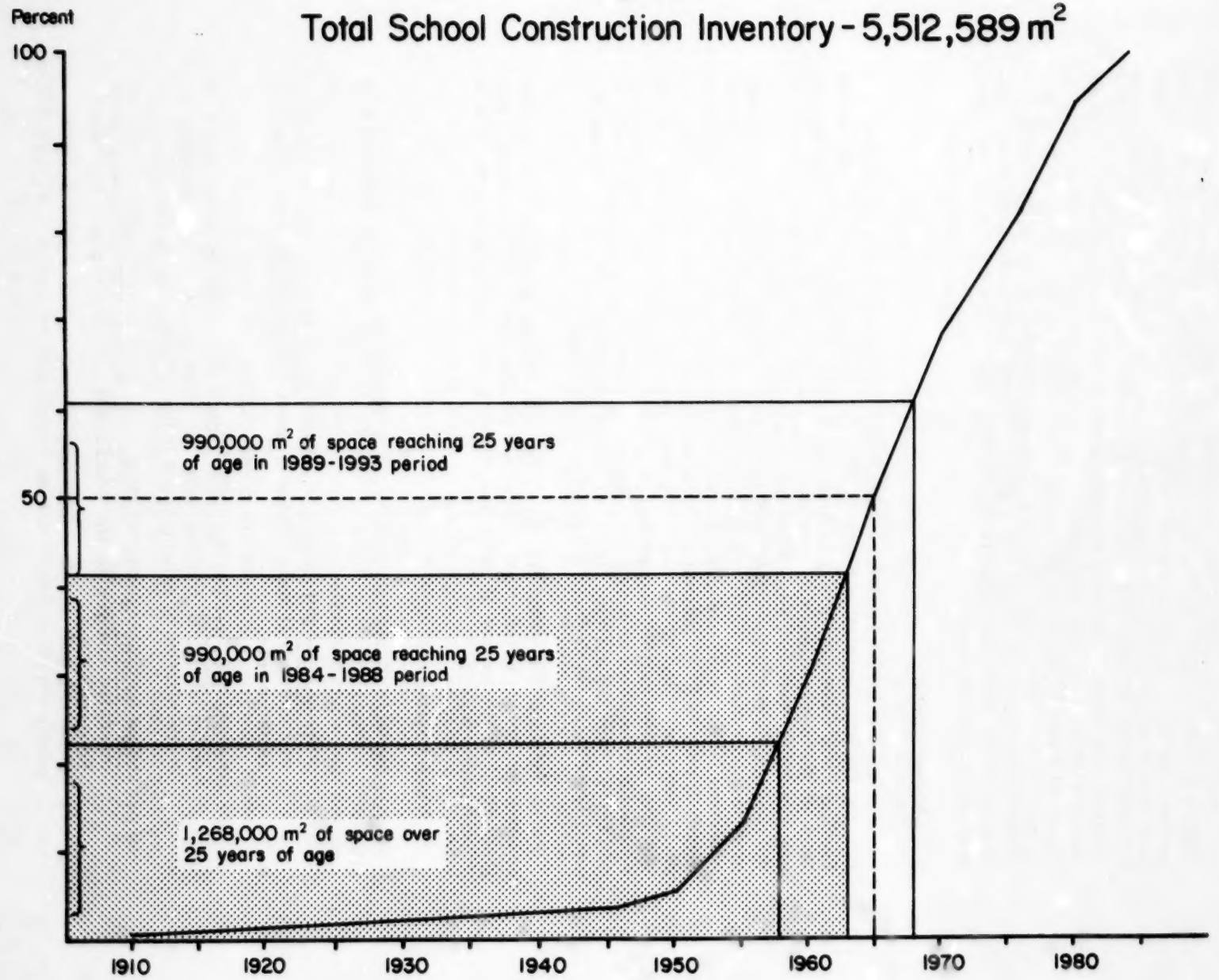
The new school capital funding plan reflects changes in both process and outcomes. The previous plan was structurally sound in that it contained factors contributing to financial equity, efficiency and long-range planning. The new plan retains these structural factors, and adds to them, a more rigorous determination of need and the setting of local and provincial priorities. Another significant change is the reduction of pupil place exemptions from around 231,000 to approximately 100,000. Finally, because so much school space is twenty-five years old, or older (see Figure 2), and because so much of this space is in urban areas where it could be used, modernization is included as a part of the new plan. The intent is that modernized space can provide an alternative to constructing new space in many cases.

The overall intent of the new plan is to bring the inventory of usable pupil spaces more into line with the current enrolment levels.

### Criteria for New Plan

The 1984-88 School Capital Funding Plan is designed to meet several criteria. Specifically, the intention for the plan is to foster: local planning which can yield local outcomes compatible with provincial priorities; financial equity; maximum utilization of existing school space; provision of new space where no space is available and where other alternatives do not exist; provision of upgraded space where current educational program demands outstrip the capabilities of existing facilities; re-use of excess school space; community use; and the provision of space for elementary children as near to their homes as possible.

Figure 2


Percent
Total School Construction Inventory - 5,512,589 m²
100
50
990,000 m² of space reaching 25 years of age in 1989-1993 period
990,000 m² of space reaching 25 years of age in 1984-1988 period
1,268,000 m² of space over 25 years of age
1910
1920
1930
1940
1950
1960
1970
1980

**Funding Formula Adjustments**

Largely as a result of the exemptions of more than 231,000 pupil spaces under the 1979-83 plan, the average utilization ratio for all jurisdictions was 98 percent and the Utilization Factor equated to 1.00. As a consequence, there were few incentives for good planning available to influence school jurisdictions in their decisions regarding providing of school facilities. To remedy the situation, the exemptions were changed to allow only a five percent exemption plus the effect of the 0.85 divisor in calculating the Utilization Factor. Approved leases of space for government agencies and community use continue to qualify for exemption. The net level of exemptions is equivalent to one exempt pupil space for every four pupils. No exemptions are allowed for age. New space is added to capacity counts one year after the tender has been approved by the Minister.

**Modernization**

During the 1979-83 period modernization was included as a category of the Building Quality Restoration Program (BQRP). Under the new School Capital Funding Plan, modernization is included as an alternative to new construction. Much of the new construction currently takes place in urban areas and within easy travelling distances from older but poorly utilized schools. The intent of the new plan is that these older schools should be modernized (if required) and used to accommodate more transported students. Modernization is also an important factor in the new plan for two additional reasons. First, as shown in Figure 2, more than 40 percent of the school space in Alberta will reach an age of 25 years or older in the next five year period. This space needs to be upgraded to meet current educational program requirements and to protect the substantial investment already made. Second, research indicates that 2/3 of one percent of the replacement costs of school buildings should be earmarked annually for major realignment or remodeling of schools.

To increase the feasibility of using modernized space in lieu of new construction, school jurisdictions will receive an increase in their transportation grant equal to the number of additional students they transport as a result of a modernization project.

**Priority System**

To meet the criteria for capital funding, the following set of priorities is in effect:

> First priority will be given to those cases where the health or safety of children is at stake. These projects will include modernization and replacements.
>
> Second priority will include: space requirements when space is unavailable and transportation to other space is not feasible, or modernization of existing space in lieu of new construction.
>
> Third priority will be assigned to facility needs resulting from mandated changes to the educational program required by Alberta Education.

Fourth priority will be assigned to facility requirements arising from obsolescence, e.g., the facilities can no longer accommodate the current educational program. Facility requirements in this category will most often be for modernization.

Fifth priority will be assigned to projects designed to facilitate community use.

Sixth priority will be assigned to neighborhood schools.

Lowest priority will be accorded to requests for space where other nearby space could suffice and/or transportation is feasible.

**The Approval Process**

The following procedures outline the 1984-88 School Capital Funding Plan for approval of capital projects (new construction, additions and modernization).

1. School jurisdictions will submit three-year capital plans with five-year enrolment projections. Projects for each year will be ranked in terms of local priority. These capital plans will be updated and resubmitted annually. The submissions will be received up to the following cutoff dates:

| | |
|---|---|
| 1984 projects | 15 February 1984 |
| 1985 projects | 30 June 1984 |
| Subsequent years | 31 March in preceding year |

2. Once received, the jurisdictions' capital plans will be reviewed and prioritized (see above) by School Buildings Services Branch and Regional Office personnel. An integrated provincial capital plan will be developed, costed, and submitted to the School Buildings Board for approval.

   To ensure that emergencies (projects that could not be predicted and included in capital plans) can be funded without delay, a contingency fund will be maintained.

3. The School Buildings Board will approve the highest priority projects to the extent coverable by the capital funding available in any year. Projects not approved in any year may be added to the jurisdictions' capital plans for consideration in subsequent years.

4. Support for capital projects will be based on an Equity Factor, a Utilization Factor, the approved area of the projects, and a support price reflecting current economic conditions.

These procedures are used because they provide for the shortest planning time (some provinces expend up to five years between jurisdiction application for approval and project completion) and they offer simplicity.

When a modernization project proposal is found that fits better into a BQRP category, it will be transferred to the BQRP with permission of the

jurisdiction. When a modernization project fails to receive funding in any year because of low priority, and when it contains an element or elements that would normally be considered under BQRP guidelines, the jurisdiction will be given 30 days to resubmit the project for consideration as a BQRP project in the current year. Alternatively, the jurisdiction may choose to resubmit the project as either a modernization or BQRP project in the next planning cycle.

## 1984-88 BUILDING QUALITY RESTORATION PROGRAM (BQRP)

The previous BQRP included several components: structural, mechanical, electrical, codes, vocational education equipment, modernization, aesthetic upgrading, site improvement, and special projects approved by the Minister.

A recent study and review of the BQRP indicated that the basic program structure was acceptable to school jurisdictions across the province. The changes in the 1984-88 BQRP are intended to focus the use of available resources into the highest provincial priorities.

### Criteria for BQRP

The basic parameters of the 1984-88 BQRP have remained relatively unchanged. The new BQRP has been designed to meet specific criteria: to remediate failure of building components; to preserve the capital investment already made in school facilities; to ensure usefulness, healthfulness and safety of school facilities; and to foster energy conservation in schools.

### BQRP Priorities

First priority will be given to projects designed to remediate health, safety or acute structural deficiencies in school buildings.

To ensure that other provincial priorities shall be met, some funds will be earmarked for special purposes such as energy conservation, Business Education equipment upgrading and ministerially approved special projects.

Second priority will be given to projects designed to overcome immediate needs to preserve the quality of school buildings. Projects could include mechanical systems, electrical systems, codes and structural deficiencies.

Third priority will be given to projects designed to improve the quality of, electrical and mechanical components, and the aesthetics or architectural finishes of school facilities.

### BQRP Funding Formula

In the past, BQRP projects have been funded at 80 percent of approved or actual costs, whichever was lower, and adjusted by Age Factors. In the new program funding will be based on an Equity Factor (the same as for new construction) and an Age Factor.

### Control Procedures for BQRP

The following procedures shall be followed in the BQR Program.

1. School boards will be required to submit annual project plans,

for each year, to the department. These may be submitted at any time up to the following cutoff dates:

| | |
|---|---|
| 1984 projects | 15 February 1984 |
| 1985 projects | 30 June 1984 |
| Subsequent years | 31 March in preceding year |

2. Upon receipt, these projects will be reviewed, costed, and a priority classification assigned.

3. Prioritized lists of projects will be submitted to the School Buildings Board for approval. Within two months after the cutoff date the School Buildings Board will determine which projects can be approved and funded and school boards will be notified.

4. Project funding will be calculated by using an Equity Factor, an Age Factor and the estimated or actual cost of the project (whichever is lower).

These procedures are based on recent studies of the BQRP and take into consideration the time required to approve projects intended for completion during the months of July and August in each year.

## SUMMARY

To those who are already involved in school facility planning, the new programs appear familiar although they contain several significant changes. The newer facility planners should understand that the capital funding plan that was introduced in 1979 has served Albertans well. The changes in this plan are intended to provide more equity among school districts and to ensure that the most needed facilities requirements are funded first. This is especially important during this current period of economic restraint. The most significant changes included in this plan are: 1) changes to the space exemptions in order to bring all districts into the operating range of the Utilization Factor of the funding formula; 2) consideration of modernization in lieu of new construction as a way of reducing some of the excess space inventory currently on hand; 3) development of a planning mechanism that will more closely link local planning with provincial planning and priorities; 4) requirement for capital plans describing BQRP projects; 5) inclusion of an Equity Factor in the funding formula for BQRP; and 6) an increase in a school jurisdiction's transportation grant equal to the number of additional students transported as a result of a modernization project.